

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A computer-readable medium having a base generator class stored thereon for use by developers to create generators to perform specific tasks, the base generator class comprising:

- a base generator class constructor;
- a generator properties object that provides incrementation capability, which allows the value of a generator property to vary during consecutive executions of a generator;
- a status indicator;
- a schedule object; and
- a logging object.

2. The computer-readable medium of Claim 1, wherein the generator properties object that provides incrementation capability includes a plurality of generator properties.

3. The computer-readable medium of Claim 2, wherein said plurality of generator properties includes:

- a value of a generator property;
- a plurality of incrementation settings;
- a default incrementor that changes the value of the generator property; and
- a default validator that validates the value of the generator property.

4. The computer-readable medium of Claim 1, wherein the status indicator includes a status user interface (UI) for displaying the execution status of generators.

5. The computer-readable medium of Claim 1, wherein the schedule object comprises:

- a start condition under which the execution of a generator may be started;
- a recurrence condition under which the execution of a generator may recur;
- an end condition under which the execution of a generator stops; and

a dialog box that can be used to accept user input.

6. The computer-readable medium of Claim 1, wherein the logging object enables the recording of the execution process of a generator.

7. A method of creating a generator, wherein the generator performs a specific task such as creating a file, comprising:

creating a new generator class that inherits a base generator class that contains incrementation capability;

creating a public default constructor for the new generator class that overrides the base generator class constructor; and

implementing a function in the new generator class to perform the specific task.

8. The method of Claim 7, wherein creating a public default constructor comprises:

initializing the base generator class constructor with the name and the description of the generator; and

defining the properties of the generator.

9. The method of Claim 8, wherein defining properties for the generator comprises:

- (a) defining the name of a property;
- (b) setting a default value for the property;
- (c) providing a description for the property;
- (d) specifying incrementation settings for the property;
- (e) creating a custom property incrementor, if applicable;
- (f) creating a custom property validator, if applicable; and
- (g) repeating (a)-(f) for all properties of the generator.

10. The method of Claim 7, further comprising implementing a function to be executed before each execution of a generator.

11. The method of Claim 7, further comprising implementing a function to be executed after each execution of a generator.

12. A method of using a generator that performs a specific task such as creating a file, comprising:

customizing the settings of a generator, including incrementation settings that specify how the value of a generator property may vary between generated objects; and
executing the generator with the customized settings.

13. The method of Claim 12, customizing the settings of a generator, is accomplished through a user interface.

14. The method of Claim 13, further comprising:
starting a object generator user interface;
selecting a generator; and
customizing properties of the generator;

15. The method of Claim 14, selecting a generator further comprising adding a generator from files containing one or more generators.

16. The method of Claim 14, further comprising loading the settings of a generator from a file.

17. The method of Claim 14, wherein customizing the properties of the generator comprises:

- (a) selecting a property;
- (b) specifying the value of the property;
- (c) specifying the incrementation settings of the property; and
- (d) repeating (a)-(c) until there are no more properties to be customized.

18. The method of Claim 14, further comprising setting a schedule for executing the generator.

19. The method of Claim 14, further comprising setting logging options for executing the generator.

20. The method of Claim 14, further comprising saving the settings of the generator.

21. The method of Claim 12, customizing the settings of a generator, is accomplished programmatically.

22. The method of Claim 21, further comprising:
creating a new instance of the generator;
setting the number of objects to be generated by the generator; and
customizing the properties of the generator.

23. The method of Claim 22, wherein customizing the properties of the generator comprises:

- (a) setting the value of a property;
- (b) specifying the incrementation settings of the property; and
- (c) repeating (a)-(b) until there are no more properties to be customized.

24. The method of Claim 21, further comprising:
creating a new instance of the generator; and
loading saved settings of the generator from a file.

25. The method of Claim 21, further comprising:
creating a new instance of the generator;
loading saved settings of the generator from a file; and
implementing a function to execute the generator asynchronously.

26. The method of Claim 21, further comprising:
creating a new instance of the generator;
loading saved settings of the generator from a file;

displaying an object generation status UI; and
adding the generator to the object generation status UI.

27. The method of Claim 21, further comprising:
creating a new instance of the generator;
loading saved settings of the generator from a file;
displaying a schedule dialog box that allows a user to specify a schedule for
executing the generator; and
displaying a logging dialog box that allows a user to specify logging options for
executing the generator.

28. The method of Claim 12, further comprising executing the generator through
a user interface.

29. The method of Claim 12, further comprising executing the generator
programmatically.

30. A method for object generation using a base generator class, comprising:
creating a generator that performs a specific task;
customizing the settings of the generator, including incrementation settings that
specify how the value of a generator property may vary between generated objects; and
executing the generator with the customized settings.

31. The method of Claim 30, wherein creating a generator that performs a specific
task comprises:
creating a new generator class that inherits the base generator class;
creating a public default constructor for the new generator class that overrides the
base generator class constructor; and
implementing a function in the new generator class to perform a specific task.

32. The method of Claim 31, creating a public default constructor further
comprising:

initializing the base generator class constructor with the name and the description of the generator; and

defining the properties of the generator.

33. The method of Claim 32, wherein defining properties for the generator includes :

- (a) defining the name of a property;
- (b) setting a default value for the property;
- (c) providing a description for the property;
- (d) specifying the incrementation settings for the property;
- (e) creating a custom property incrementor, if applicable;
- (f) creating a custom property validator, if applicable; and
- (g) repeating (a)-(f) for all properties of the generator.

34. The method of Claim 31, further comprising implementing a function to be executed before each execution of a generator.

35. The method of Claim 31, further comprising implementing a function to be executed after each execution of a generator.

36. The method of Claim 30, customizing the settings of a generator is accomplished through a user interface.

37. The method of Claim 36, further comprising:

starting an object generator user interface;
selecting a generator; and
customizing the properties of the generator;

38. The method of Claim 37, wherein selecting a generator comprises adding a generator from files containing one or more generators.

39. The method of Claim 37, further comprising loading generator settings from a file.

40. The method of Claim 37, wherein customizing the properties of the generator comprises:

- (a) selecting a property;
- (b) specifying the value of the property;
- (c) specifying the incrementation settings of the property; and
- (d) repeating (a)-(c) until there are no more properties to be customized.

41. The method of Claim 37, further comprising setting a schedule for executing the generator.

42. The method of Claim 37, further comprising setting logging options for executing the generator.

43. The method of Claim 37, further comprising saving the settings of the generator.

44. The method of Claim 30, customizing the property settings of a generator is accomplished programmatically.

45. The method of Claim 44, further comprising:
creating a new instance of the generator;
setting the number of objects to be generated by the generator; and
customizing the properties of the generator.

46. The method of Claim 45, wherein customizing the properties of the generator comprises:

- (a) setting the value of a property;
- (b) specifying the incrementation settings of the property; and
- (c) repeating (a)-(b) until there are no more properties to be customized.

47. The method of Claim 44, further comprising:
creating a new instance of the generator; and
loading saved settings of the generator from a file.
48. The method of Claim 44, further comprising:
creating a new instance of the generator;
loading saved settings of the generator from a file; and
implementing a method to execute the generator asynchronously.
49. The method of Claim 44, further comprising:
creating a new instance of the generator;
loading saved settings of the generator from a file;
displaying an object generation status UI; and
adding the current generator to the object generation status UI.
50. The method of Claim 44, further comprising:
creating a new instance of the generator;
loading saved settings of the generator from a file;
displaying a schedule dialog box that allows a user to specify a schedule for
executing the generator; and
displaying a logging dialog box that allows a user to specify logging options for
executing the generator.
51. The method of Claim 30, further comprising executing the generator through
a user interface.
52. The method of Claim 30, further comprising executing the generator
programmatically.
53. A method of varying the value of a property associated with a task, during
consecutive executions of the task, comprising:
allowing the value of the property to vary during consecutive executions of the task;

creating settings associated with the property that control how the value may vary during consecutive executions of the task; and

allowing a user executing the task to customize the settings according to user preference.

54. The method of Claim 53, wherein the step of allowing the value of the property to vary during consecutive executions of the task further comprises:

implementing a function that increments a property value according to the settings associated with the property that control how the value may vary during consecutive executions of the task.

55. A computer-readable medium containing computer-executable instructions for a method of varying the value of a property associated with a task, during consecutive executions of the task, the method comprising:

allowing the value of the property to vary during consecutive executions of the task;

creating settings associated with the property that control how the value may vary during consecutive executions of the task; and

allowing a user executing the task to customize the settings according to user preference.

56. The computer-readable medium of Claim 55, wherein the step of allowing the value of the property to vary during consecutive executions of the task further comprises:

implementing a function that increments a property value according to the settings associated with the property that control how the value may vary during consecutive executions of the task.